

REMARKS/ARGUMENTS

Claims 11-23 are active.

For illustrative purposes, the invention as defined in independent Claim 11 is:

A process for combating acarids in the storage of cereals,  
comprising placing the cereals in contact with a powder  
comprising more than 40% by weight of sodium bicarbonate.

The obviousness rejection over Misato in view of “Applying Pesticides Correctly” and Knight is not tenable because (A) the combined teachings of the cited art do not suggest the claimed method of combating acarids with any reasonable expectation because the cited art is to fungi and insects-two very different categories of microorganisms; and (B) doing what is described by the combined teachings of the cited art do not inherently achieve that which is claimed. Further discussion on these points follow.

Misato describes a fungicide and fruit storage disease preventing composition. Col. 1, lines 15-18. The reference states that sodium bicarbonate has a fungicidal effect on plant diseases (col. 1, lines 37-38) but cannot be used alone as a fungicide due to inferior adhesiveness and spreadability (col. 1, lines 47-49). As a result, Misato uses sodium bicarbonate in combination with a surfactant, the combination to be used as a fungicide on vegetables and fruits (col. 1, lines 53-55 and col. 2, lines 39-49).

What Misato does not disclose or suggest is that sodium bicarbonate has acaricidal effects, nor does the reference suggest the use of sodium bicarbonate for combating acarids (or for combating anything else, for that matter) in cereals “Applying Pesticides Correctly” does not remedy the defects of Misato, as this reference only discusses the application of pesticides under various conditions and does not disclose or suggest that sodium bicarbonate has acaricidal effects, or that it should be used in cereals.

Finally, Knight relates to the treatment of insects, rather than acarids, evidence already has been provided establishing this difference. Col. 2, lines 56-63 of Knight shows

that the mechanism of action of his disclosed composition critically depends on and works between these plates to enter the body. Acarids do not have primary body segmentation. That is, their skeleton is in one piece (see evidence previously submitted). In fact, in the present invention the composition is believed to act only at the external surface of the acarid. See, e.g., specification page 2, lines 24-34.

How could it have been obvious to extend the teachings of a fungicide (not at all related to acarids) and insects (distinctly different) to have a reasonable expectation that acarid infestation of cereal would occur? It couldn't have been and the Office has not established that this is so. Other than conclusory statements unsupported by factual determinations, the rejection fails to make out a case of *prima facie* case of patentability. An obviousness rejections must be based on objective evidence of record. see. In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) ("The factual inquiry whether to combine references must be thorough and searching.' ...It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with."). For at least this reason, it is requested that the rejection be withdrawn.

The Action at page 7 purports to have considered the vast differences between fungi and insects relative to acarids but nonetheless maintains the rejection in part because Knight at col. 2, lines 56-63 allegedly "states that the crystalline particles of the invention . . . tend to pierce the exoskeleton"). This conclusory statement overlooks the actual statement of Knight, which is "As an ant or other insect moves amongst the particles, the particles tend to work themselves between the insect protective body plates and they tend to pierce the exoskeleton." (col 2, lines 60-64, emphasis added; see also FIG. 1 and FIG. 2): Thus, Knight's discussion relates to insects whose exoskeletons are divided into "plates", the dynamic movement of the insect create the penetration of the composition.

In contrast, an acarid “is generally distinguished by the lack of body segmentation. (see Encylcopedia Britanica online definition, already of record). Therefore, rather than provide support for the rejection that it would have been reasonably predicted that what is useful for insects would also be useful for acarids, Knight’s discussion actually teaches away from the claimed method. This is so because, one reading Knight’s disclosure would understand that acarids, who do not have the body segmentation that Knight describes, would not necessarily be susceptible to the same piercing effects of the particles. see MPEP § 141.02 (prior art must be considered in its entirety, including disclosures that teach away from the claims). For at least this reason as well, it is requested that the rejection be withdrawn.

To the last point that seems to underlay the rejection, inherency. According to the rejection at page 3 “The composition taught by Misato et al as a fungicide would also function as Applicants’ claimed composition, acaricide and insecticide given that the active ingredient in both compositions is the same.” (emphasis added).

This statement rings of “inherently” achieving the claimed method. However, the Office has not actually provided any proof of this. Rather, the Examiner is using Applicants’ disclosure against them. As noted by the court in *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323 (CCPA 1981), the mere fact that a certain thing may result from a given set of circumstances is not sufficient to prove inherency. Inherency may not be established by probabilities or possibilities. Something that is inherent must inevitably be the result each and every time.

It is by now well settled that the burden of establishing a *prima facie* case of anticipation (or obviousness in the present case) resides with the Patent and Trademark Office. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984), quoting *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967).

As noted by the Board of Patent Appeals and Interferences in *Ex parte Skinner*, 2 USPQ2d 1788, before an Examiner can switch the burden of proof of showing non-inherency to the applicant, the Examiner must provide some evidence or scientific reasoning to establish the reasonableness of the Examiner's belief that the functional limitation is an inherent characteristic of the prior art. In this case, the Examiner has provided no such evidence.

There is no evidence that grains susceptible to fungal infection or insect problems also necessarily have problems with acarids. While there is a possibility that grains exposed to fungi and insects MAY also be infested with acarids, the operable term "may" precludes any inherency position, which requires inevitability. For at least this reason as well, it is requested that the rejection be withdrawn.

Accordingly, and in view of the deficiencies in even the combination of Misato, "Applying Pesticides Correctly" and Knight, Applicants submit that the references fail to present a *prima facie* case of unpatentability. As such, the rejection over these references should be reconsidered and withdrawn.

To the rejection of Claim 21 under 35 USC 112, second paragraph, nothing is unclear with the term "infestation" as it relates to acarids and cereals. The essential inquiry pertaining to the requirement under 35 U.S.C. § 112, second paragraph is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity, particularly to one of ordinary skill in the relevant field. See MPEP § 2173.02.

The term "infest" is what is commonly used by practitioners in the field to characterize a problem with acarids. Much like an infection specialists will refer to bacterial, fungal or viral infection, in this art, acarids infestation is well-understood. Simply for illustration, Applicants point to the attached "FACT SHEET" from the Ohio State University discussing mites infesting Stored Foods.

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Therefore, the Claim 21 which includes the term “infestation” set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity, particularly to one of ordinary skill in the relevant field. Withdrawal of the rejection is requested.

A Notice of Allowance without further delay is kindly requested.

Respectfully submitted,

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